Interference Search

# EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L3 | 38413 | tetrahydrofuran | US-PGPUB | OR | ON | 2006/06/12 11:14 |
| L4 | 27826 | thf | US-PGPUB | OR | ON | 2006/06/12 11:14 |
| L5 | 408 | heteropolyacid | US-PGPUB | OR | ON | 2006/06/12 11:14 |
| L6 | 46342 | 3 4 | US-PGPUB | OR | ON | 2006/06/12 11:14 |
| L7 | 5 | 5 near15 6 | US-PGPUB | OR | ON | 2006/06/12 11:15 |

Inventor search

# EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L8 | 20 | (pinkos adj rolf.inv.) | US-PGPUB | OR | ON | 2006/06/12 11:22 |

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=> s heteropolyacid?
L2         1954 HETEROPOLYACID?

=> s l1(10a) l2
          24385 L1
L3            6 L1(10A) L2

=> d tot cbib abs

L3   ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2006 ACS on STN
2003:444717   Document No. 140:218195  Studies in reaction of tetrahydrofuran
      ring-opening polymerization catalyzed by heteropolyacid.  Li, Shumian; Li,
      Zhancai; Jiang, Ling; Hou, Shoujun; Fang, Shaoming (Department of Chemical
      Engineering, Zhengzhou Institute of Light Industry, Zhengzhou, 450002,
      Peop. Rep. China).  Huaxue Yanjiu Yu Yingyong, 15(1), 48-50 (Chinese)
      2003.  CODEN: HYYIFM.  ISSN: 1004-1656.  Publisher: Huaxue Yanjiu Yu
      Yingyong Bianjibu.
AB    The synthetic methods and process conditions in THF ring-opening
polymerization,
      by using heteropolyacid H3PMo12O40 as catalyst, epichlorohydrin as
      promoter, and water or ethylene glycol as chain-adjusting agent, were
      studied.  The yield of polymer reached 64.5% at optimum conditions, and
      the mol. weight can be limited within 2,000.  The properties of polyurethane
      elastomer made with these polymers were as good as that made with imported
      polymer, and some properties were even better than that made with imported
      polymer.

L3   ANSWER 2 OF 6  CAPLUS  COPYRIGHT 2006 ACS on STN
1999:634042   Document No. 131:337403  Study on polymerization mechanism of
      tetrahydrofuran with heteropolyacid-acetic anhydride catalyst.  Yin, Hong;
      Chen, Zhi-rong; Yang, Zheng; Lu, De-wei (Dep. Chem. Eng., Zhejiang Univ.,
      Hangzhou, 310027, Peop. Rep. China).  Huaxue Fanying Gongcheng Yu Gongyi,
      15(3), 288-294 (Chinese) 1999.  CODEN: HFGGEU.  ISSN: 1001-7631.
      Publisher: Zhejiangsheng Chuban Duiwai Maoyi Gongsi.
AB    Heteropolyacid-acetic anhydride has high catalysis activity in the
polymerization
      of THF.  The polymerization mechanism was investigated.  The polymerization
process
      includes four steps: (1) ligation of THF and heteropolyacid, (2) chain
      initiation, (3) chain propagation, and (4) chain termination.

L3   ANSWER 3 OF 6  CAPLUS  COPYRIGHT 2006 ACS on STN
1999:575681   Document No. 131:258282  Tetrahydrofuran polymerization initiated
      with heteropolyacid. III. Reaction behavior of ethylene oxide.  Zhang,
      Afang; Zhang, Guangli; Zhang, Hongzhi (Department of Polymer Science and
      Engineering, Chemistry Building, Peking University, Beijing, 100871),
      Peop. Rep. China).  Gaofenzi Xuebao (4), 502-505 (Chinese) 1999.  CODEN:
      GAXUE9.  ISSN: 1000-3304.  Publisher: Kexue Chubanshe.
AB    Reaction behavior of EO in the polymerization of THF initiated by H3PW12O40 was
      studied.  The polymerization started upon addition of EO, and stopped with
complete
      consumption of EO, but started again when a new portion of EO was added,
      and also stopped after the new portion of EO was exhausted again.  Part of
      EO was transformed into dioxane at the fairly beginning of polymerization in
the
      presence or absence of water, but the formation of dioxane could be
      suppressed by the addition of ethylene glycol.  Kinetic data showed that the
      concentration of propagating species maintained constant during the
polymerization with
      stepwise addition of EO.  A reaction mechanism was postulated based on the
      structure anal. of the product and kinetics study.

L3   ANSWER 4 OF 6  CAPLUS  COPYRIGHT 2006 ACS on STN
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1999:462500 Document No. 131:229061 Effective promotion of tetrahydrofuran polymerization initiated with heteropolyacid. Zhang, Afang; Zhang, Guangli; Zhang, Hongzhi (Department of Polymer Science and Engineering, College of Chemistry and Molecular Engineering, Peking University, Beijing, 100871, Peop. Rep. China). Journal of Applied Polymer Science, 73(12), 2303-2308 (English) 1999. CODEN: JAPNAB. ISSN: 0021-8995. Publisher: John Wiley & Sons, Inc..

AB THF was polymerized using the heteropolyacid H3PW12O40 as the initiator and ethylene oxide as the promoter, which effectively increased the rate and conversion of the polymerization Water and butylene glycol were used to control the mol. weight of the product in the range of 1000-3000. The polymer was found to be polyether glycol containing 10-22 mol% oxyethylene moieties with hydroxyl groups at both chain ends. The m.p. was lower by about -10° as compared to polytetramethylene ether glycol having the same mol. weight The concentration of active species remained unchanged in the main period of the polymerization, indicating the absence of chain termination. The values of the chain propagation rate constant of THF polymerization at 0 and 20° were found to be 3.78 + 10-3 and 1.98 + 10-2 L mol-1 s-1, resp., which are close to the rate constant of chain propagation of THF on ionic active species.

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

1997:3028 Document No. 126:37790 Regeneration of deactivated solid heteropolyacid catalysts. Oogoshi, Shingo; Nomura, Mamoru (Idemitsu Kosan Co, Japan). Jpn. Kokai Tokkyo Koho JP 08281118 A2 19961029 Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-83780 19950410.

AB When solid heteropolyacid catalysts containing heteropolyacid salts, which are scarcely soluble in polar liquid, are used in acid catalyst reaction, e.g., reaction of C4-6 isoparaffins with C3-5 monoolefins, and deactivated, the catalysts are regenerated by washing with liquid, e.g., H2O, C1-5 lower alcs., alkylene glycols, C≤8 lower alkyl ethers, cyclic ethers, ketones, CS2, aromatic hydrocarbons, cyclic saturated hydrocarbons, C4-10 aliphatic saturated hydrocarbons. The catalysts are regenerated by retaining stability and suitable for manufacture of alkylated gasoline, isomerization of n-paraffin, alkylation of aromatic compds., etc.

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

1989:439952 Document No. 111:39952 Heteropolyacids - new efficient initiators of cationic polymerization. Bednarek, Melania; Brzezinska, Krystyna; Stasinski, Jacek; Kubisa, Przemyslaw; Penczek, Stanislaw (Cent. Mol. Macromol. Stud., Pol. Acad. Sci., Lodz, Pol.). Makromolekulare Chemie, 190(5), 929-38 (English) 1989. CODEN: MACEAK. ISSN: 0025-116X.

AB Heteropolyacids are efficient initiators of cationic polymns., including polymns. of cyclic ethers and acetals, providing high-mol.-weight polymers. In several systems (e.g., THF, 1,3-dioxolane) the degree of polymerization is given by the ratio of concns. of monomer and initiator, as for the living system. In the polymerization of 1,3,5-trioxane, comparable polymerization rates may be obtained with ≈ 25 times less initiator consumption on weight basis (≈ 103 times less on molar basis) than for typical initiators like BF3.OR2.

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